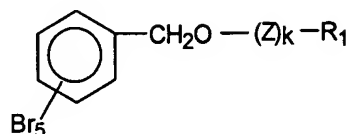


We claim:

1. A pentabromobenzyl alkyl ether of the formula:



wherein:

- Z represents the group $-(\text{Y}-\text{O})_n-$, wherein Y is a linear or branched $-(\text{C}_2-\text{C}_8)\text{alkylene}-$, preferably $-\text{CH}_2\text{CH}_2-$ and $-\text{CH}_2\text{CH}(\text{CH}_3)-$;
- n represents an integer from 2 to 4;
- k may be 0 or 1;
- R_1 represents hydrogen, a linear or branched $-(\text{C}_1-\text{C}_{10})\text{alkyl}$, a linear or branched $-(\text{C}_2-\text{C}_{10})\text{alkylene}-\text{OH}$, allyl, or 1,2-dibromopropyl;

provided that when k is zero R_1 represents a linear or branched

$-(\text{C}_4-\text{C}_{10})\text{alkyl}$ or a linear or branched $-(\text{C}_2-\text{C}_{10})\text{alkylene}-\text{OH}$ and when k is 1, R_1 represents hydrogen, a linear or branched $-(\text{C}_1-\text{C}_4)\text{alkyl}$, allyl or 1,2-dibromopropyl.

2. A pentabromobenzyl alkyl ether according to claim 1, wherein Z represents a group selected from $-(\text{C}_2\text{H}_4\text{O})_n$ and $-(\text{C}_3\text{H}_6\text{O})_n$, wherein n represents 2.

3. A pentabromobenzyl alkyl ether according to claim 1, wherein $k=1$ and R_1 represents H, methyl or butyl.

4. A pentabromobenzyl alkyl ether according to claim 1, wherein $k=0$ and R_1 represents branched $(\text{C}_8)\text{alkyl}$ or linear $(\text{C}_6)\text{alkylene}-\text{OH}$.

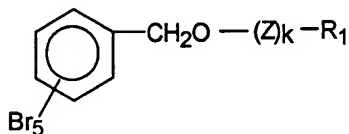
5. A pentabromobenzyl alkyl ether according to claim 1, selected from the group consisting of:

- (i) pentabromobenzyl-O-CH₂-CH₂OCH₃;
- (ii) pentabromobenzyl-O-CH₂CH₂O(CH₂)₃CH₃;
- (iii) pentabromobenzyl-O-(CH₂CH₂O)₂CH₃;
- (iv) pentabromobenzyl-O-(CH₂CH₂O)₂H;
- (v) pentabromobenzyl-O-(CH₂)₆OH;
- (vi) pentabromobenzyl-O-CH₂CH(C₂H₅)(CH₂)₃CH₃;
- (vii) pentabromobenzyl-O-CH₂CH₂OCH₂CH=CH₂;
- (viii) pentabromobenzyl-O-(C₃H₆O)₂-CH₃
- (ix) pentabromobenzyl-O-(C₃H₆O)₂-H

6. A compound according to any one of claims 1 to 5, for use as a fire retardant.

7. A compound according to any one of claims 1 to 5, for use as a fire retardant in a polymeric composition or in polymer-containing composition.

8. A fire retarded polymer ic or polymer -containing composition comprising a pentabromobenzyl alkyl ether of the formula:



wherein Z, R₁ and k are as defined in claim 1.

9. A fire retarded c omposition according to claim 8, wherein said polymer is selected from the group consisting of chlorinated polyethylene, polyethylene, polypropylene, styrene resins, high -impact polystyrene, polyvinyl chloride, acrylonitrile -butadiene-styrene copolymer,

flexible and rigid polyurethane, epoxy resins and unsaturated polyester resins.

10. A fire retarded composition according to claim 9 , wherein said polymer is polypropylene.

11. A fire retarded composition according to claim 9 , wherein said polymer is high impact polystyrene (HIPS).

12. A fire retarded composition according to claim 9 , wherein said polymer is acryl -butadiene-styrene terpolymer (ABS) .

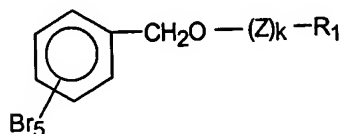
13. A fire retarded composition according to claim 9 , wherein said polymer is polyurethane.

14. A fire retarded composition according to claim 8 , wherein said polymer is selected from the group consisting of polyurethane, polypropylene copolymer, high impact polystyrene (HIPS) and acryl -butadiene-styrene terpolymer (ABS), and said pentabromobenzyl alkyl ether is selected from the group consisting of:

- (i) pentabromobenzyl-O-CH₂-CH₂OCH₃;
- (ii) pentabromobenzyl-O-CH₂CH₂O(CH₂)₃CH₃;
- (iii) pentabromobenzyl-O-(CH₂CH₂O)₂CH₃;
- (iv) pentabromobenzyl-O-(CH₂CH₂O)₂H;
- (v) pentabromobenzyl-O-(CH₂)₆OH;
- (vi) pentabromobenzyl-O-CH₂CH(C₂H₅)(CH₂)₃CH₃;
- (vii) pentabromobenzyl-O-CH₂CH₂OCH₂CH=CH₂;
- (viii) pentabromobenzyl-O-(C₃H₆O)₂-OCH₃
- (ix) pentabromobenzyl-O-(C₃H₆O)₂-H

15. A fire retarded composition according to any one of claims 8 to 14, further comprising a metal oxide, preferably Sb_2O_3 .

16. A process for the preparation of a pentabromobenzyl alkyl ether of the formula:



wherein Z, R_1 and k are as defined in claim 1, comprising reacting a glycol, a mono-, or di-alcohol of the formula $\text{HO}-(\text{Z})_k-\text{R}_1$, wherein Z, R_1 and k are as defined in claim 1, or the corresponding metal alcoholate thereof, with a pentabromobenzyl halide, preferably pentabromobenzyl bromide, optionally in the presence of a base.

17. A pentabromobenzyl alkyl ether according to claim 1, for use as a fire retardant, substantially as described and exemplified in the specification.

18. A process for the preparation of pentabromobenzyl alkyl ethers as defined in claim 1, substantially as described and exemplified in the specification.

19. A fire retarded polymer composition comprising pentabromobenzyl alkyl ether according to claim 1, substantially as described and exemplified in the specification.